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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,997	01/29/2004	Shinpei Okajima	SN-US035209	2012

22919 7590 10/31/2005

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EXAMINER

BELLINGER, JASON R

ART UNIT	PAPER NUMBER
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3617

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/765,997	Applicant(s) OKAJIMA, SHINPEI	
	Examiner Jason R. Bellinger	Art Unit 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4-16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dixon et al in view of Terry. Dixon et al shows a rim 1 having an annular tire attachment portion adapted for mounting a tire thereon, an annular spoke attachment portion fixedly, which includes an interior surface, and coupled to the tire attachment portion. The spoke attachment portion includes a pair of annular side portions and an inner annular section that forms a generally U-shaped cross-sectional shape with an annular hollow area.

A plurality of circumferentially spaced attachment openings 41, each with a central axis extending therethrough, is located in the spoke attachment portion. A plurality of reinforcement members 44 is fixedly coupled to the spoke attachment portion of the rim 1 at the attachment openings 41. Each reinforcement member 44 includes a rim-facing surface (namely the radially outer face of portion 44) that contacts the outer surface of the spoke attachment portion, and an exterior facing surface (namely the radially inner face of portion 44) that faces in an opposite direction from the rim-facing surface. A through opening extends between the rim-facing and exterior facing surfaces, and is aligned with the attachment openings 41. The reinforcement members

(collectively 42 & 44) may include internal threads for directly coupling a threaded end of a spoke 2 (see column 7, lines 57-61).

The attachment openings 41 are formed in an inner annular section of the spoke attachment portion that forms an inner radial periphery of the rim 1, such that the central axes of the spoke attachment openings 41 extend in a substantially radial direction of the rim 1. Each reinforcement member 44 does not have a cylindrical projection extending from the exterior facing surface in an inner radial direction.

Each reinforcement member 44 includes an annular peripheral edge that is defined by a base section to define a step between the base section and the outer surface of the spoke attachment portion.

The tire attachment portion of the rim 1 includes an annular bridge section that extends between a pair of annular tire support sections to form a substantially U-shaped cross-section.

Dixon et al does not show the reinforcement members having an elongated shape. Terry shows a reinforcement member **F** being elongated in the circumferential direction of a rim **H**, with a rim-facing surface of the reinforcement member **F** having a contour that corresponds to a contour of the outer surface of a spoke attachment portion of the rim **H**. Each reinforcement member **F** is integrally formed as a one-piece, unitary member. Each reinforcement member **F** has an annular peripheral edge defined by a base section that defines a step between the base section and the outer surface of the spoke attachment portion. The annular peripheral edges include a tapering part (namely

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the shape of the side portions of the reinforcement member **F**) and a radial part (the portion of the edge that forms the step).

Each reinforcement member **F** has a maximum overlapping dimension that overlaps the annular spoke attachment portion of the rim **H** as measured from an outer peripheral edge to a respective spoke attachment opening. The maximum overlapping dimension is at least half as large as a maximum transverse dimension of the spoke attachment openings.

The reinforcement member **F** does not have a cylindrical projection extending from the exterior facing surface in an inner radial direction. A tubular section *f* extends from the base of the reinforcement member *F* through one of the attachment openings of the spoke attachment portion.

Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the reinforcement members of Dixon et al with the configuration as taught by Terry, as a substitution for equivalent reinforcing structure, for the purpose of reducing the concentration of stresses about the spoke attachment openings, reducing the number of parts of the wheel assembly, and dependent upon the shape of the spoke attachment portion of the rim.

The tubular section *f* of the reinforcement members **F** of Terry would then have an internally threaded bore for directly coupling to the threaded end of the spokes **D**, which would further reduce the number of parts of the assembly by eliminating the need for spoke nipples.

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3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dixon et al in view of Terry as applied to claims 1-2, 4-16, and 20 above, and further in view of Owen et al.

Dixon et al as modified by Terry does not specify that the reinforcement members are brazed to the rim. Owen et al teaches the use of reinforcement members **c** attached to a rim **b**, wherein the reinforcement members **c** are bonded (welded) to the spoke attachment portion **g** (see lines 30-34).

While Owen et al does not specify the bond formed between the reinforcement member **c** and the outer surface of the spoke attachment portion **g** is formed by brazing, both welding and brazing are well known in the art as being similar methods of forming a permanent bond between metals involving melting metal to form the bond, therefore it would have been obvious to one of ordinary skill at the time of the invention to braze the reinforcement members of Dixon et al as modified by Terry to the rim as an equivalent method of providing a permanent bond between the reinforcement members and the rim, dependent upon what bonding materials and equipment is available, cost, and whether or not the rim needs to be completely airtight.

The reinforcing member of Dixon et al as modified by Terry and Owen et al would not require an interior member (42 as shown in Dixon et al) to maintain the reinforcing member's position relative to the rim, due to the fact that the member would be in permanent connection to the rim (through the welding process taught by Owen et al), thus reducing the number of parts of the rim assembly. Therefore, the interior surface of

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the spoke attachment portion of Dixon et al would be free from contact with the reinforcement member taught by Terry.

4. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dixon et al in view of Terry as applied to claims 1-16 and 20 above, and further in view of Lacombe et al. Dixon et al as modified by Terry does not show the annular bridge section of the rim being free of openings except for a single valve aperture.

Lacombe et al teaches the use of a bicycle rim having an annular bridge section devoid of any openings except for a valve opening. Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the bridge section of the rim of Dixon et al as modified by Terry for the purpose of providing an airtight and easily sealable rim.

Response to Arguments

5. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R. Bellinger whose telephone number is 571-272-6680. The examiner can normally be reached on Mon - Thurs (9:00-4:30).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Morano can be reached on 571-272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason R Bellinger
Examiner
Art Unit 3617

JASON R. BELLINGER
PATENT EXAMINER

jrb *JRB*
10/27/05